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REPORT NO. 5

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PROCUREMENT SECTION
CURRENT RECORDS

Cotton Fiber and Processing Test Results

CROP OF

1977



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 November 18, 1977

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1977

Discussion of Test Results

Short staple cottons tested through November 11 from the Southwestern area are slightly longer, more uniform, finer and stronger than last year, according to the Cotton Division, Agricultural Marketing Service, USDA. Both Shirley Analyzer nonlint content and picker and card waste are lower than a year ago. Yarns spun from these samples are considerably stronger this season. The average spinning potential yarn number is higher.

Average test results for all medium staple samples tested show slightly longer and coarser fibers than a year ago. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Medium staple samples tested from the Southeast show fibers to have about the same fiber characteristics as a year ago at this time. Picker and card waste is lower than a year ago. Yarns spun from these samples show weaker skein strength and lower appearance grades. Yarn imperfections are fewer. The spinning potential yarn number is lower.

South Central medium staple samples tested are longer, coarser and weaker than a year ago at this time. Shirley Analyzer nonlint content is higher. Yarns spun from these samples show slightly weaker yarn skein strength with lower appearance grades. Yarn imperfections are higher.

Southwestern medium staple samples tested are slightly longer, more uniform and stronger at zero gage fiber strength tests. Picker and card waste is lower than a year ago. Yarns spun from these samples show lower yarn appearance grades. Yarn imperfections are fewer. Spinning potential yarn number is lower.

Medium staple samples tested from the West are slightly shorter, more uniform, coarser and stronger at zero gage strength tests. Picker and card waste is slightly lower than last season. Yarns spun from these samples are weaker than a year ago. Yarn imperfections are higher.

Long staple samples from the Southeast are shorter, less uniform, coarser and weaker than last season at this time. Both Shirley Analyzer nonlint content and Picker and card waste are higher. Yarns spun from these samples are weaker with lower appearance grades. Yarn imperfections are fewer. Spinning potential yarn number is lower.

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1976, USDA, AMS, Cotton Division, June 1977.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through November 11, 1977

1/

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results								
		Fibrograph 2.5% span		Mike fine- ness 50/2.5 unif.		Fiber strength Zero gage 1/8" gage		S A nonlint waste		P & C waste		Yarn quality Skein str.		Appear- ance actions		Spin. Potent.
		No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.	22s	Carded Yarn	Yarn No.
Short Staple:																
Southwest		10	.97	44	4.4	84	20	3.3	7.3	85	110	14	36			
1976		41	.98	46	4.2	89	22	3.1	5.4	99	110	13	46			
1977																
Medium Staple:																
Southeast		11	1.08	45	4.8	86	24	3.1	6.5	109	101	23	56			
1976		21	1.08	45	4.8	87	23	3.1	6.0	97	94	20	51			
1977																
South Central		54	1.08	45	4.3	88	24	2.7	6.1	109	100	15	55			
1976		100	1.11	45	4.6	86	23	3.5	6.0	105	96	21	57			
1977																
Southwest		25	1.07	45	4.2	81	22	3.2	6.2	104	98	20	58			
1976		42	1.08	46	4.2	86	22	3.2	5.7	103	91	18	54			
1977																
West		14	1.13	45	4.2	89	26	2.5	5.8	123	88	21	68			
1976		8	1.12	46	4.4	91	26	2.4	5.5	117	89	24	67			
1977																
U.S. Average		104	1.09	45	4.3	86	23	2.8	6.1	110	98	18	57			
1976		171	1.10	45	4.5	86	23	3.3	5.9	104	94	21	56			
1977																
Significant dif- ference 2/				0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3		

1/ Based on a limited number of samples of modal quality
2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through November 11, 1977

1/ (continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results					
		Length		Strength	SA	P&C Waste		Comber Waste	Yarn Quality		Appearance		SPY
		Span	Unif	Zero gage	1/8" gage	Non- lint	gage	carded	combed	carded	combed	carded	comb
No.	No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Pct.	Pct.	Lbs.	Lbs.
												22s Carded	22s Carded & Combed
												Indx	Indx Yarn
												No.	No.
Long Staple:													
Southeast													
1976	4	1.15	46	4.4	88	26	2.8	6.3	15.8	118	140	108	21
1977	6	1.13	45	4.8	86	23	3.2	6.6	*	102	*	103	*
South Central													
1976	1	1.11	41	3.7	91	27	3.3	6.6	22.0	113	141	100	17
1977	2	1.14	44	4.4	90	24	3.8	6.8	*	105	*	95	*

Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3
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1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

* Combed data not available.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification		Fiber Test Results										Processing Test Results - Carded Yarns										Spin. Potential			
No	Sample Number	Digital Fibrograph			Fiber Strength			S.A. Elongat'n 1/8"			Color Raw Stock			P & C			Strength			Elongation			Appearance Index		
No	Grade	Style	2.5% span	Unif	Mike	Zero Gage	1/8" Gage	Non-lint	Gra	Yel	Waste	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	No	No	No	No	No	No
No	Name & Code	32s	In	Pct	Rate	MPsi	G/tex	Pct	Pct	No	Pct	Lbs	Lbs	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	
SOUTHWEST AREA																									
NORTHWEST TEXAS																									
1 MID	AMHERST	31	31	0.92	49	4.0	84	20	6.5	1.0	0	3	4.0	264	87	7.2	5.0	8	120	110	35	13	40		
1 MID	ANSCON	31	31	0.94	45	3.5	86	21	7.1	6.11	1	4	5.0	290	92	7.5	6.0	4	110	100	37	20	44		
1 MID	BRCNFIELD	31	31	1.00	45	3.7	88	22	6.2	3.0	1	4	4.0	299	103	7.5	6.0	8	120	110	25	11	56		
1 MID	LAMESA	32	30	0.93	46	4.1	88	20	5.9	4.0	2	5	6.0	266	86	7.5	5.0	8	120	110	23	13	41		
1 MID	LCRENZO	31	32	1.06	44	3.7	84	19	6.4	2.0	0	3	4.0	308	101	8.3	6.0	5	120	100	27	15	52		
1 MID	NEWCASTLE	31	31	0.96	46	4.3	90	21	6.5	2.5	1	4	5.0	292	98	7.4	5.0	8	130	110	22	11	45		
1 MID	PACUCAH	31	31	0.96	46	4.9	88	22	6.4	6.11	1	4	4.0	295	97	7.6	6.0	3	130	120	13	8	47		
1 MID	PETERSBURG	31	32	0.98	47	4.7	86	21	6.2	2.1	1	3	5.0	289	97	7.4	6.0	2	130	120	16	10	46		
1 MID	RALLS	31	32	1.02	46	3.4	89	23	6.5	3.0	0	3	5.0	301	105	8.2	6.0	7	120	110	22	13	57		
2 MID	RULE	31	32	1.06	47	4.4	88	22	6.3	2.6	1	4	4.0	302	103	7.8	6.0	8	120	100	20	14	59		
1 MID	VERNON	32	30	0.96	47	4.7	87	21	6.2	2.7	1	4	4.0	287	96	7.3	6.0	0	120	110	19	11	47		
1 MID	VERNON	31	32	1.00	45	3.8	102	23	4.9	2.6	0	3	4.0	327	116	7.4	6.0	3	130	110	17	12	67		

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number		Fiber Test Results								Processing Test Results - Carded Yarns															
		Digital Fibrograph		Mike		Fiber Strength		Elongat'n 1/8"		S.A. Non-Lint		Color Stock		P & C Waste		Strength 22s or 50s or 27 tx		Elongation 22s or 50s or 27 tx		Appearance Index		Imperfect'n 22s or 50s or 27 tx		Spin. Potential	
No	Grade	Staple 2.5% span	Unif. span	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No	No	
SOUTHEAST AREA																									
ALABAMA																									
FAMILTON																									
1 MID LT SP	32	33	1.08	43	4.6	79	21	6.8	1.8	3	4	4.5	92	29	5.9	4.3	90	70	13	12	51				
2 MID LT SP	32	33	1.07	43	4.7	82	22	6.6	1.6	3	4	6.0	90	27	5.8	3.7	90	60	14	13	49				
MERIDIANVILLE																									
2 LM SP	53	33	1.07	44	4.7	93	21	5.3	6.2	7	4	8.9	79	22	4.6	3.3	93	60	22	23	25				
WILSONVILLE																									
2 MID LT SP	32	34	1.10	44	4.2	84	21	6.9	2.2	2	3	5.3	97	31	6.5	4.5	90	70	16	14	55				
GEORGIA																									
ALLENCHN																									
2 SLM LT SP	42	34	1.09	46	5.1	88	24	5.5	3.8	2	4	7.2	92	28	5.2	3.7	80	60	21	16	46				
NORTHCAROLINA																									
RED SPRINGS																									
1 SLM	41	35	1.12	46	4.8	90	24	5.4	2.6	2	3	5.1	107	36	5.4	4.3	90	70	18	13	59				
SOUTHCAROLINA																									
MAYESVILLE																									
2 MID	31	34	1.08	44	4.08	87	23	5.4	3.3	2	3	5.8	90	29	5.4	3.7	80	60	28	23	44				
SOUTH CENTRAL AREA																									
ARKANSAS																									
ATTHEIMER																									
3 SLM	41	36	1.15	45	4.1	87	25	6.7	2.3	1	2	5.1	112	38	6.4	4.7	80	70	19	15	68				
BISCECE																									
2 SLM LT SP	42	35	1.10	46	4.8	84	22	5.6	4.0	4	4	6.1	101	31	5.9	4.4	100	70	22	16	61				
DUMAS																									
3 SLM	41	35	1.11	45	4.6	85	22	6.2	3.2	1	2	5.2	104	35	5.9	4.4	90	70	20	13	61				
EUDORA																									
3 SLM	41	35	1.10	48	4.7	88	24	6.8	2.9	1	3	5.6	108	36	6.5	4.8	110	80	12	9	57				
HUGHES																									
3 SLM	41	35	1.11	46	4.8	87	23	6.1	2.0	2	3	4.8	101	33	6.1	4.5	80	60	23	19	55				
KEISER																									
3 LM	51	34	1.10	44	3.9	81	21	5.8	3.2	3	2	5.9	89	28	5.5	3.8	110	80	13	12	51				

1/ End breakage too high to spin 50s yarn. This Yarn spun and strength adjusted to equivalent of 50s.

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(Continued)

Production Area, Classification & Sample Number		Fiber Test Results								Processing Test Results - Carded Yarns															
		Digital Fibrograph		Fiber Strength		S.A. Non- Latent 1/8"		Color Raw Stock Gra. Yel		Strength P & C Waste		Elongation		Appearance Index		Imperfect'sns									Spin. Potential
No	Grade	Staple span	2.5% Unif.	Mike	Zero 1/8"	Gage	Gage	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHEAST AREA--(Continued)																									
LOUISIANA	LAKE PROVIDENCE	2 SLM	41	36	1.15	47	4.7	85	24	6.7	3.1	1	2	5.6	114	37	6.9	5.0	100	80	19	11	70		
LAKE PROVIDENCE	2 LM PLUS	50	35	1.13	44	4.9	86	22	5.0	3.5	2	2	6.3	95	28	5.1	3.6	90	60	25	17	49			
MCAROE	1 SLM	41	35	1.13	46	4.5	79	23	6.8	3.0	1	3	4.7	108	35	6.4	4.9	90	60	24	20	66			
SHREVEPORT	2 SLM	41	35	1.13	46	5.0	81	22	6.4	3.1	2	3	6.1	98	30	6.0	4.3	100	80	11	11	53			
SICILY ISLAND	2 SLM LT SP	42	34	1.07	46	5.0	84	20	5.7	3.7	3	4	7.0	86	25	5.7	3.7	90	80	20	14	44			
MISSISSIPPI	BELZONI	2 LM	51	35	1.14	44	4.2	82	22	6.8	4.2	2	2	5.8	111	38	6.5	5.1	100	70	16	13	62		
CLARKSDALE	3 LM	51	35	1.11	46	4.6	84	23	5.9	4.6	3	2	5.6	99	31	5.7	4.1	80	70	23	17	55			
COPC	3 LM	51	34	1.12	46	4.7	83	23	6.0	4.1	2	2	6.3	100	32	6.0	4.3	90	70	17	15	55			
GREENVILLE	3 SLM	41	36	1.13	44	4.2	87	23	6.4	2.6	1	2	6.0	112	39	6.4	4.9	90	70	21	16	67			
GREENVILLE	2 LM	51	36	1.13	46	4.7	91	24	5.8	4.8	2	2	7.2	111	36	6.0	4.4	90	70	22	20	59			
HOLLANDALE	3 LM	51	36	1.18	46	4.3	83	24	6.5	5.9	2	2	6.9	113	38	6.6	5.0	90	70	24	18	73			
MORGAN CITY	3 LM	51	35	1.06	45	4.2	87	22	5.8	4.7	4	2	6.4	90	29	5.9	4.7	80	60	24	19	44			
SCOTT	2 LM	51	35	1.14	44	4.0	90	22	5.5	4.1	2	2	6.0	109	36	6.0	4.4	90	70	25	16	67			
TRIAD	3 SLM LT SP	42	35	1.10	45	4.5	88	21	5.7	3.1	3	3	6.2	101	32	6.0	4.2	100	80	15	12	53			

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977---(Continued)

Production Area, Classification		Fiber Test Results								Processing Test Results - Carded Yarns								
Sample Number	Grade	Digital Fibrograph	Fiber Strength	Elong. 1/8"	S.A. Non-Lint	Color	P & C Waste	Strength	Elongation	Appearance Index	Imperfect 'ns	Spin. Potential						
No	Name & Code	Staple span	Mike Zero	Gage	Gage	Raw Stock	Yel	22s or 50s	22s or 50s	22s or 50s	No	No						
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	
SOUTHEAST AREA---(Continued)																		
MISSISSIPPI---(Continued)																		
TRIBBETT	3 LM	51	1.14	4.5	4.2	94	20	4.6	2.6	4	2	5.8	104	33	5.1	3.8	90	
WATER VALLEY	3 SLM	34	1.08	4.3	4.3	84	22	7.0	2.9	2	3	5.4	92	29	5.4	3.8	80	
MISSOURI																		
HAYTI	2 SLM	41	1.12	4.7	5.1	84	23	6.5	1.9	2	2	5.4	104	31	6.3	4.1	100	
PARMA	2 LM LT SP	52	1.06	4.6	5.2	85	21	6.1	4.4	4	3	9.1	84	26	5.3	4.0	90	
SENATH	3 LM	51	1.07	4.4	4.0	83	21	5.9	4.0	2	3	6.9	101	34	5.9	4.5	80	
SENATH	3 SLM LT SP	42	1.10	4.5	4.4	78	22	7.2	3.7	3	3	5.4	101	33	6.2	4.5	90	
TENNESSEE																		
ERADEN	3 SLM LT SP	42	1.10	4.6	4.6	83	23	6.5	3.9	3	3	5.7	94	29	6.2	4.0	100	
RCSEMARK	2 SLM	41	1.06	4.6	5.0	90	21	5.4	2.1	3	3	6.2	94	30	5.9	4.0	90	
	3 SLM LT SP	42	1.02	4.3	3.7	88	21	5.6	3.5	4	4	6.8	85	28	5.4	3.4	80	
SOUTHWEST AREA																		
CENTRAL TEXAS																		
GRANDVIEW	3 MID	31	0.98	4.3	3.9	92	22	5.3	2.9	1	4	7.2	76	20	4.8	3.5	80	
NORTHWEST TEXAS																		
ACKERLY	2 MID LT SP	32	31	0.98	4.6	4.3	92	22	5.9	3.3	1	4	6.5	91	29	5.2	3.9	90

1/ End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(Continued)

Production Area, Classification			Fiber Test Results								Processing Test Results - Carded Yarns								
No	Name & Grade	Staple	Digital Fibrograph			Fiber Strength		S.A. Elongat'n 1/8"		Color P & C		Strength		Elongation		Appearance Index		Imperfect's	
			2.5% span	2.5% Unif.	Mike	Zero Gage	1/8" Gage	Non-Lint	Raw Stock	Waste	22s or 27tx	50s or 27tx	22s or 27tx	50s or 27tx	22s or 27tx	50s or 27tx	No	No	Spin. Potential
			32s	In	Pct	Rag	Rag	Mpsi	G/tex	Pct	Pct	Pct	Pct	Pct	Pct	Pct	No	No	No
SOUTHWEST AREA---(Continued)																			
NORTHWEST TEXAS---(Continued)																			
1 MID	31	31	0.96	4.4	3.6	8.9	2.9	5.9	1.6	1	3	5.9	8.1	22 1/2	5.3	3.8	70	60	26
2 MID	31	31	0.91	4.3	3.6	8.6	2.0	6.3	2.6	1	4	5.7	7.2	21 1/2	5.1	3.6	80	70	19
LUBBOCK																			
1 MID	31	36	1.16	4.5	4.3	8.6	2.3	5.9	4.1	1	3	6.8	10.5	35	6.0	4.3	70	60	35
2 MID	31	36	1.10	4.5	4.2	8.4	2.3	6.6	4.1	1	4	5.7	10.7	37	6.6	4.9	80	60	22
WEST																			
ARIZONA																			
BUCKEYE																			
1 SLM	41	35	1.11	4.4	4.7	9.0	2.5	6.2	3.0	2	3	6.2	10.1	33	5.8	4.3	100	70	16
MARIOPA																			
1 SLM	41	35	1.12	4.3	4.5	9.1	2.4	6.4	2.5	2	3	5.1	10.6	35	6.0	4.4	90	70	23
CALIFORNIA																			
ARVIN																			
2 SLM PLUS	40	36	1.13	4.7	4.2	9.6	2.7	5.7	2.4	0	3	5.9 1/2	12.7	47	6.3	5.0	80	70	23

^{1/2} End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.

^{1/2} Cotton stuck to processing rolls.

* 100% selected for tests, less than 100% in area.

Table 4 -Cotton, American upland long staple: Quality characteristics by production areas, crop of 1977